

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for detecting ~~a disease or autoimmune state~~the presence of an antibody in a mammal, comprising:

immobilizing ~~a disease or autoimmune~~an antigen on a substrate to form a spot;

contacting said immobilized antigen with a sample from said mammal under conditions such that any antibodies from said mammal specific for said antigen bind thereto;

washing the substrate to remove unbound antibodies;

contacting said antibodies from said mammal ~~and~~bound to said antigen with a metal-antibody conjugate, wherein the antibody of the metal-antibody conjugate is specific for IgG of the species of mammal being tested;

washing the substrate to remove unbound metal-antibody conjugate;

applying a voltage between electrodes which are separated by said spot; and

measuring a current across said spot, wherein conduction of a current is indicative of the ~~disease or autoimmune state~~binding of the metal-antibody conjugate to the antibody bound to the immobilized antigen.

2. (Currently amended) A method for detecting the presence of an antigen, comprising:

immobilizing an antibody specific for said antigen on a substrate to form a spot;

contacting said immobilized antibody with a sample under conditions such that any antigen present in the sample binds to said immobilized antibody to form an immobilized antibody-bound antigen complex;

washing the substrate to remove unbound antigen;

contacting said immobilized antibody-bound antigen complex with a metal-antibody conjugate, wherein the antibody of the metal-antibody conjugate is specific for said antigen;

washing the substrate to remove unbound metal-antibody conjugate;

applying a voltage between electrodes which are separated by said spot; and

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measuring a current across said spot, wherein conduction of a current is indicative of the ~~presence of said antigen~~ binding of the metal-antibody conjugate to the immobilized antibody-bound antigen complex.

3. (Cancelled)
4. (New) The method of claim 1, wherein the presence of the antibody is indicative of a disease or autoimmune state.
5. (New) The method of claim 4, wherein the disease or autoimmune state is SLE.